

1646  
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<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)		Application Number	10/051,841
		Filing Date	January 17, 2002
		First Named Inventor	Kathleen H. YOUNG <i>et al.</i>
		Group Art Unit	1646
		Examiner Name	Joseph F. Murphy
Total Number of Pages in This Submission	15	Attorney Docket Number	031896-069100 (AHP98133C1)

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input checked="" type="checkbox"/> w/PTO-1449 <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Declaration and Power of Attorney <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Application Data Sheet <input type="checkbox"/> Request for Corrected Filing Receipt with Enclosures <input type="checkbox"/> A self-addressed prepaid postcard for acknowledging receipt <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):  <b>PTO Form-1449 with copies of forty-six (46) references.</b>
Remarks		<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 19-2380 for the above identified docket number.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Raymond Van Dyke (Reg. No. 34,746) Nixon Peabody LLP 401 9 <sup>th</sup> Street, N.W. Suite 900 Washington, D.C. 20004-2128
Signature	
Date	April 25, 2005

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]	
I hereby certify that this correspondence is being:	
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Date	Signature
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The PTO did not receive the following listed Items(s) Some NPLs

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).  <h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">FOR FY 2005</h3>		Complete if Known	
		Application Number	10/051,841
		Filing Date	January 17, 2002
		First Named Inventor	Kathleen H. YOUNG <i>et al.</i>
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Examiner Name	Joseph Murphy
TOTAL AMOUNT OF PAYMENT	(\$) <b>180.00</b>	Art Unit	1646
		Attorney Docket No.	031896-69100



**METHOD OF PAYMENT** (check all that apply)

☐ Check  
 ☐ Credit Card  
 ☐ Money Order  
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☒ Deposit Account  
 Deposit Account Number: 19-2380  
 Deposit Account Name: NIXON PEABODY LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below  
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 ☒ Credit any overpayments

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**FEE CALCULATION**

**1. BASIC FILING, SEARCH AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	<u>Small Entity</u> Fee (\$)	Fee (\$)	<u>Small Entity</u> Fee (\$)	Fee (\$)	<u>Small Entity</u> Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	<u>Small Entity</u> Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple document claims	360	180

Total Claims      Extra Claims      Fee (\$)      Fee Paid (\$)      Multiple Dependent Claims  
 \_\_\_\_\_ - 20 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_  
 HP -- highest number of total claims paid for, if greater than 20

Indep. Claims      Extra Claims      Fee (\$)      Fee Paid (\$)  
 \_\_\_\_\_ - 3 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_  
 HP -- highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	_____ / 50 = _____	_____ (round up to a whole number)	x _____ = _____	_____

**4. OTHER FEE(S)**

	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	_____
Other: <u>Information Disclosure Statement Fee</u>	<b>180.00</b>

<b>SUBMITTED BY</b>			
Signature		Registration No. 34,746 (Attorney/Agent)	Telephone 202-585-8000
Name (Print/Type)	Raymond Van Dyke		Date April 25, 2005

SEND TO: Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



Docket No. 031896-069100  
(AHP98133 C1)  
Patent

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*In re* Patent Application of: )  
Kathleen H. YOUNG *et al.* ) Group Art Unit: 1646  
Serial No.: 10/051,841 ) Examiner: Joseph F. Murphy  
Filed: January 17, 2002 ) Confirmation No: 2237  
For: METHODS FOR IDENTIFYING )  
MODULATORS OF N-TYPE ION )  
CHANNEL INACTIVATION )

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. § 1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. §1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the cited documents is enclosed.

This Supplemental Information Disclosure Statement is being filed pursuant to 37 C.F.R. § 1.97(c) before the mailing date of a final office action under 37 C.F.R. § 1.113. A check in the amount of \$180 is also submitted pursuant to 37 C.F.R. § 1.97(c).

It is requested that the accompanying PTO-1449 be considered and made of record in the above-identified application. To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initial a copy of this form be returned to the undersigned.

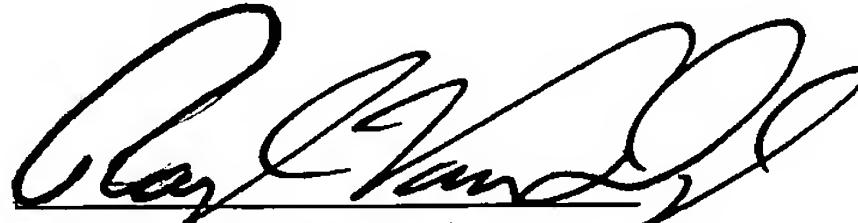
Applicants respectfully note that four (4) of the cited references on the Form PTO-1449 constitute entire books, *i.e.*, Hille, Ausubel *et al.*, Sambrook *et al.*, and Rose *et al.*, and full copies of these more general materials will be forwarded to the Examiner upon request.

04/26/2005 HALI11 00000066 192380 10051841  
01 FC:1806 180.00 DA

The Commissioner is hereby authorized to charge any fees connected with this filing, which may be required now, or credit any overpayment to Deposit Account No. 19-2380.

Respectfully submitted,

Date: April 25, 2005

By:   
Raymond Van Dyke  
Registration No. 34,746

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<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	
				Filing Date	
				First Named Inventor	
				Art Unit	
				Examiner Name	
Sheet	1	of	4	Attorney Docket Number	031896-069100 (AHP98133C1)

U.S. PATENT DOCUMENTS					
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-5,776,689	07-07-1998	Karin, M. <i>et al.</i>	
		US-6,080,557	06-27-2000	Sims, J.E. <i>et al.</i>	

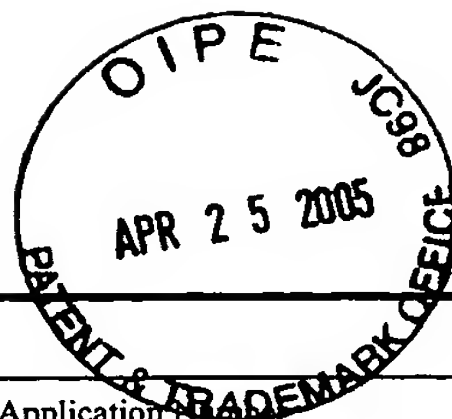
FOREIGN PATENT DOCUMENTS						
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		ANGELIDES, K.J. and T.J. NUTTER, <i>J. Biol. Chem.</i> , 258:11958-11967 (1983)	
		BUTTERWORTH, J.F. and G.R. STRICHARTZ, <i>Anesthesiology</i> , 72:711-734, (1980)	
		CROW, T., <i>Trends Neurosci.</i> 11:136-142 (1988)	
		HEGINBOTHAM, L. <i>et al.</i> , <i>Science</i> , 258:1152-1155 (1992)	
		HILLE, B., <i>Ionic Channels of Excitable Membranes</i> , (Sinauer Press, Sunderland, MA) 1992	
		HODGKIN, A.L. and HUXLEY, A.F., <i>J. Physiol.</i> , 117:500-544 (1952)	
		JESSELL, T.M. and KANDEL, E.R., <i>Cell</i> , 72(Suppl.):1-30 (1993)	
		MILLER, C., <i>Science</i> , 252:1092-1096 (1991)	
		MUNIZ, Z.M. <i>et al.</i> , <i>Biochemistry</i> , 31:12297-12303 (1992)	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.



<b>Substitute for form 1449B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/051,841
				Filing Date	January 17, 2002
				First Named Inventor	Kathleen H. YOUNG <i>et al.</i>
				Art Unit	1646
				Examiner Name	Joseph F. Murphy
Sheet	2	of	4	Attorney Docket Number	031896-069100 (AHP98133C1)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		ARONHEIM, A. <i>et al.</i> , <i>Cell</i> , 78:949-961 (1994)	
		ARONHEIM, A. <i>et al.</i> , <i>Mol. Cell. Biol.</i> , 17(6):3094-3102 (1997)	
		AVRUCH, J., <i>Mol. Cell. Biochem.</i> , 182(1-2):31-48 (1998)	
		BOGUSKI, M.S. and MCCORMICK, F. <i>Nature</i> , 366:643-654 (1993)	
		BRODER, Y.C. <i>et al.</i> , <i>Curr. Biol.</i> , 8(20):1121-1124 (1998)	
		BUSS, J.E. <i>et al.</i> , <i>Mol. Cell. Biol.</i> , 8:3960-3963 (1988)	
		CARTER-SU, C. and SMIT, L.S., <i>Hormone Res.</i> , 53:61-83 (1998)	
		DURRELL, S.R. and GUY, H.R., <i>Biophys. J.</i> , 62:238-250 (1992)	
		FIELDS, S. and SONG, O.-K., <i>Nature</i> , 340:245-246 (1989)	
		LI, M. <i>et al.</i> , <i>Science</i> , 257:1225-1230 (1992)	
		MILLER <i>et al.</i> , <i>Genetic Engineering, Principles and Methods</i> , 8:277-298, Setlow, J.K. and Hollaender, A. (eds), Plenum Press, NY (1986)	
		PARCEJ, D. N., and DOLLY, J.O., <i>Biochem. J.</i> , 257:899-903 (1989)	
		PICARD, D. <i>et al.</i> , <i>Gene</i> , 86:257-261 (1990)	
		RUPPERSBERG, J.P. <i>et al.</i> , <i>Nature</i> , 353:657-660 (1991)	
		SHI, G. <i>et al.</i> , <i>Neuron</i> , 16:843-852 (1996)	
		STRICHARTZ, G. <i>et al.</i> , <i>Ann. Rev. Neurosci.</i> , 10:239-67 (1987)	
		WILSON, T.E. <i>et al.</i> , <i>Science</i> , 252:1296-1300 (1990)	

Examiner Signature		Date Considered	
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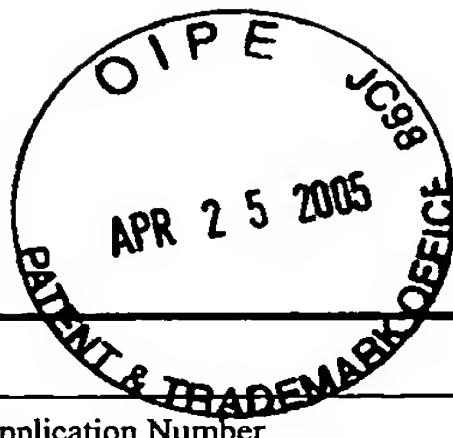
Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/051,841
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				First Named Inventor	Kathleen H. YOUNG <i>et al.</i>
				Art Unit	1646
				Examiner Name	Joseph F. Murphy
Sheet	3	Of	4	Attorney Docket Number	031896-069100 (AHP98133C1)

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		ALBUS, H. and WILLIAMSON, R., <i>Epilepsia</i> , 39(2):124-139 (1998)		
		ALTSCHUL, S.F. and GISH, W., <i>Local alignment statistics</i> , Doolittle (ed.), <i>Methods in Enzymology</i> 266:460-480 (1996)		
		ALTSCHUL, S.F., <i>J. Mol. Biol.</i> , 215:403-410 (1990)		
		AUSUBEL, F.M. <i>et al.</i> (eds), "Current Protocols in Molecular Biology," <i>John Wiley &amp; Sons, Inc.</i> Sections 2.10 and 6.3-6.4 (1995)		
		CHARDIN, P. <i>et al.</i> , <i>Science</i> , 260:1338-1343 (1998)		
		DURFEE, T., <i>et al.</i> , <i>Gene Devel.</i> , 7:555-569 (1993)		
		FINNEY, M., <i>Current Protocols in Molecular Biology</i> , Wiley & Sons, NY, 1993		
		FORCE, T. and BONVENTRE, J.V., <i>Hypertension</i> 31(Part 2):152-161 (1998)		
		GISH, W. and STATES, D.J., <i>Nature Genetics</i> , 3:266-272 (1993)		
		GUSTIN, M.C., <i>et al.</i> , <i>Microbiol. Mol. Biol. Rev.</i> , 62(4):1264-1300 (1998)		
		HANCOCK, J.F. <i>et al.</i> , <i>EMBO J.</i> , 10(13):4033-4039 (1991)		
		KARLIN, S. and ALTSCHUL, S.F., <i>Proc. Natl. Acad. Sci. USA</i> , 90:5873-5877 (1993)		
		LAI, C.-C. <i>et al.</i> , <i>Mol. Cell. Biol.</i> , 13(3):1345-1352 (1993)		
		QUILLIAM, L.A. <i>et al.</i> , <i>Proc. Natl. Acad. Sci. USA</i> , 91:8512-8516 (1994)		
		SAMBROOK, J., FRITSCH, E.F., and MANIATIS, T. (eds), "Molecular Cloning: A Laboratory Manual," <i>Cold Spring Harbor Laboratory Press</i> , Cold Spring Harbor, NY, Chapters 9 and 11 (1989)		
		SHAW, G., <i>BioEssays</i> , 18:35-46 (1996)		
		WHITMARSH, A.J. and DAVIS, R.J., <i>J. Mol. Med.</i> , 74(10):589-607 (1996)		

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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	10/051,841
				Filing Date	January 17, 2002
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	<	FREY, H.-H. and BARTELS, I., <i>Epilepsy Res.</i> , 27:151-164 (1997)		
		ISACOFF, E.Y., <i>et al.</i> , <i>Nature</i> , 353:86-90 (1991)		
		ROSE, M.D., <i>et al.</i> , <i>Methods in Yeast Genetics</i> , Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1990		
		WALSH, J., <i>Proceeding: Intl. Symp. Lab. Auto. Robotics</i> , Boston, MA, Oct. 19-22, 1997		
		STEPHENS, G.J. <i>et al.</i> , <i>FEBS Letters</i> , 378:250-252 (1996)		
		WANG, Z. <i>et al.</i> , <i>J. Biol. Chem.</i> , 271(45)28311-28317 (1996)		
		Yan, M. <i>et al.</i> , <i>Science</i> , 290:523-527 (2000)		
		Choi, K.L. <i>et al.</i> , <i>Proc. Natl. Acad. Sci. USA</i> , 88:5092-5095 (1991)		

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